



STUDENT REPORT

DETAILS

Name

ZIHAN

Roll Number

3BR23EE113

EXPERIMENT

Title

SUB ARRAY WITH MAX SUM

Description

You are given a list of integers, and your task is to find the subarray with the maximum sum. Write a function or method to solve this problem efficiently and return the maximum sum.

Input:

n: the no of elements in the array

nums (List of integers): A list of integers ($1 \leq \text{len}(\text{nums}) \leq 10^5$)

Sample input:

8
-1 2 3 10 -4 7 2 -5

Sample output:

20

Explanation:

The max subarry sum is 20. The subarray is [2,3,10,-4,7,2]

Source Code:

```
# Read the number of elements
n = int(input())

# Read the list of integers
arr = list(map(int, input().split()))

# Initialize variables
current_sum = arr[0]
max_sum = arr[0]

# Iterate through the array starting from the second element
for i in range(1, n):
    current_sum = max(arr[i], current_sum + arr[i]) # Update current_sum
    max_sum = max(max_sum, current_sum) # Update max_sum if current_sum is greater

# Print the maximum sum of the subarray
print(max_sum)
```

RESULT

5 / 5 Test Cases Passed | 100 %